Market regulation and market structures and instruments are very important determinants of the flow of information and how information is impounded into prices. Crucially, they vary substantially across asset classes and also between the U.S. and Europe. The market structure problem has been further aggravated in recent times, as more trades are executed off the regular exchanges (in dark pools) and information is not impounded in prices via trades. This project is devoted to understanding the impact of regulation and new market structures and instruments on market quality and price formation. The first project addresses issues related to new trading mechanisms and their impact on market quality. In the second and third project, we try to understand the importance of incentives to create liquidity in the market, and how different incentives affect market quality. In the fourth paper we address the issue of the introduction of a new exchange and how that affect the equilibria in the market. The last paper address attempts to address intermarket linkages by investigating the relation between stock and bond markets in the U.S. In the following, I will describe the results of the most important projects.

The recent proliferation of algorithmic trading, new trading venues and innovative new trading products raise many issues about financial regulation and market design. One such trading product is flash orders introduced by Nasdaq on June 05, 2009. Flash orders are actionable indications of interest (IOI) that expose submitted marketable orders for a pre-defined period of time (500 milliseconds) to only Nasdaq participants, at or improving the national best bid or offer (NBBO) which is quoted at another trading venue. In a recent paper with Johannes Skjeltorp and Wing Wah Tham, we use the introduction and removal of the flash order facility by Nasdaq as a natural experiment to study the impact of *flash orders* on market quality. We find that flash orders significantly improve liquidity in Nasdaq. In addition overall market quality improves substantially when the flash functionality is introduced and deteriorates when it is removed. One explanation for our findings is that flash orders are placed by less informed traders and fulfil their role as advertisement of uninformed liquidity needs. They successfully attract responses from liquidity providers immediately after the announcement is placed, thus lowering the risk bearing cost for the overall market. The many concerns raised over flash orders do not appear to be vindicated by the data, on the contrary actionable IOIs and voluntary pre-trade transparency improves the market quality for all participants. Thus, the results of this paper informative for the Securities and Exchange Commission (SEC) decision making and venues that continue to support actionable IOIs. In addition, our results have important implications for the information efficiency of prices, investors' trading strategies, market quality, market makers' behavior, and investors' welfare.

Trading platforms using electronic limit order books increasingly charge different fees for traders submitting limit orders (“makers”) and traders submitting market orders (“takers”). In particular, they offer rebates to makers, contributing in this way to the trading profits of high frequency market-makers. This practice is viewed as a way to influence liquidity supply and liquidity demand in securities markets but is highly controversial. Foucault, Kadan and Kandel (2011) develop a new type of liquidity externality (cross-sided) between liquidity makers and takers where an increase in the monitoring intensity of liquidity makers (takers) or liquidity provision induces a positive externality on liquidity takers (makers), which increases the speed of liquidity consumption. In the second paper, we investigate the liquidity externality between market makers and takers, by testing the empirical implications of this model. We use exogenous changes in the make/take fee structure and a technological shock for liquidity takers, as experiments to cleanly identify a new type of liquidity externality and cross-side complementarities of liquidity makers and takers in U.S. equity markets. We find that there are strong liquidity externalities between liquidity providers and takers. Shocks to fees of takers cause changes in the length of the liquidity cycles of both

makers and takers. A change in technology that improves market takers ability to monitor the market reduces both the maker and taker liquidity cycle. In addition we investigate a reduction in the tick size, and find that it significantly reduces the make and the take cycles. Understanding liquidity externalities is extremely important as it has implications for changes in trading activities, commonality in liquidity, leverage buyout activity, privatization, market design and transparency, and market regulation. Despite its importance, there is little empirical work on liquidity externalities, because identifying and measuring liquidity empirically is extremely challenging. Our findings inform the current debate on make/take fees and optimal fee structures.

In the last paper, we assess the effect of equity market liquidity on U.S. bond risk premia. Equity market liquidity has been shown to precede macroeconomic information. Macroeconomic information is one of the main determinants of bond risk premia. Our results indicate that equity market liquidity significantly affects bond premia. An increase in illiquidity in the stock market increases bond risk premia. The difference between the liquidity of the smallest and largest stocks seems to be an especially strong predictor of bond premia. This is not surprising because it is highly likely that investors first pull out from the least liquid stocks during recessions, causing the liquidity gap between the two to increase. We then study the hypothesis of flight-to-quality by looking at mutual fund flows. We find that changes in liquidity are related to shifts of U.S. mutual fund flows, from equity to money market funds.